

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 82.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018184**Date Inspected:** 08-Nov-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Westmont Industries**Location:** Santa Fe Springs, CA.**CWI Name:** Ruben Dominguez**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Travelers**Summary of Items Observed:**

The Quality Assurance Inspector Sean Vance arrived on site at Westmont Industries (WMI) in Santa Fe Springs, CA, to randomly observe the in process welding of the Travelers. The QA Inspector arrived on site to randomly observe the WMI Quality Control (QC) Inspectors in process and completed visual and nondestructive testing. Upon the arrival of the QA Inspector the following observations were made:

Traveler Test Rack

On this date, The QA Inspector observed production welders Mr. Jim Muetzel (WID # 3133) and Mr. Larry Swanson continuing to perform Gas Metal Arc welding (GMAW) and fitting activities on plate material, for the Traveler Test Rack. The QA Inspector observed that the activities were being performed on the top and bottom flange plate material Complete Joint Penetration (CJP) splices, for the Box Beam Assembly 1-A1.

On this date, the QA Inspector observed production welder Mr. Michael Ruiz (WID # 3151) continuing to perform Flux Core Arc welding (FCAW) welding activities on the vertical post to base support columns and connector plates, for the Traveler Test Rack. The QA Inspector observed that the assembly appeared to be identified as Column A1, Assembly 9-A7. Reference shop drawing WMI -TTR-7.

The QA Inspector observed Mr. Ruiz performing the FCAW in various positions, throughout the shift and the weld joints appeared to be designated as fillet and flare groove welds, per the shop drawings.

On this date, the QA Inspector observed production welder Mr. Alberto Cortes (WID # 3141) continuing to perform Flux Core Arc welding (FCAW) welding activities on the vertical post to base support columns and connector plates, for the Traveler Test Rack. The QA Inspector observed that the assembly appeared to be

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identified as Column A3, Assembly 11-C7. Reference shop drawing WMI –TTR-7.

The QA Inspector observed Mr. Cortes performing the FCAW in various positions, throughout the shift and the weld joints appeared to be designated as fillet and flare groove welds, per the shop drawings.

On this date, the QA Inspector observed production welder Mr. Jose Lucho (WID # 61) continuing to perform Flux Core Arc welding (FCAW) welding activities on the vertical post to base support columns and connector plates, for the Traveler Test Rack. The QA Inspector observed that the assembly appeared to be identified as Column A2, Assembly 10-B7. Reference shop drawing WMI –TTR-7.

The QA Inspector observed Mr. Lucho performing the FCAW in various positions, throughout the shift and the weld joints appeared to be designated as fillet and flare groove welds, per the shop drawings.

SAS-EB Traveler

Fixed Stairs Section

On this date, the QA Inspector observed WMI Production personnel Mr. Cesar Canales continuing to perform fitting activities on material, for the SAS-EB Fixed Stairs Section. During observation, the QA Inspector observed that Mr. Canales was in process of fitting the Stair Riser material, piece mark identified as B259 to Frame Assemblies, piece marks identified as 10-A237 and 11-B237, per the shop drawings. The QA Inspector further observed that during the fitting of these piece marks, that the bottom of the Stair Riser material, was in contact with the Diagonal Supports, piece marks identified as E256 and F256. The QA Inspector then reviewed the shop drawings and per the drawings, an unspecified dimensional gap is required at this location and 3" x 3" x .25" (76 mm x 76 mm x 6 mm) plate material, piece mark identified as "b" and is designed per the drawings, with a 5mm fillet seal weld. Reference Approved as Noted Shop Drawing WMI-SAS-203 and see Summary of Conversations below, for additional information.

On this date, the QA Inspector observed Westmont Industries (WMI) production welder, Mr. Jose Rodriguez (WID # 3031), continuing to perform Flux Core Arc Welding (FCAW) activities on the previously fit Frame assemblies, identified as 10-A237, 11-B237, 3-A217, 4-A218, 5-A223 and 6-A224. The QA Inspector observed throughout the shift, that the FCAW was being performed in various positions, on the connector plate and Tube Steel (TS) material fillet and flare groove welds.

Lower Truss Section

On this date, the QA Inspector observed Westmont Industries (WMI) production welder, Mr. Daniel Grayum (WID # 3049), continuing to perform Flux Core Arc Welding (FCAW) activities on the previously fit Frame assemblies, identified as 12-A240, 13-B240, 7-A225, 8-A226 and 9-A230. The QA Inspector observed throughout the shift, that the FCAW was being performed in various positions, on the connector plate and Tube Steel (TS) material fillet and flare groove welds.

On this date, the QA Inspector observed WMI production welder Mr. Raymundo Anaya (WID # 3196), performing fitting and tacking activities on the various connector plates to Tube Steel (TS) material, for the SAS-EB Lower Truss Section assembly. The QA Inspector observed that the plate material had been previously cut to specific dimensions and the material appeared to have been previously identified, per the shop drawing Bill of Material List. The QA Inspector observed Mr. Anaya occasionally reference the nearby shop drawings and then fit and tack weld the connector plate material to previously fit TS material. The QA Inspector observed Mr. Anaya randomly perform these activities throughout the shift in addition to what appeared to be the in-process creation of

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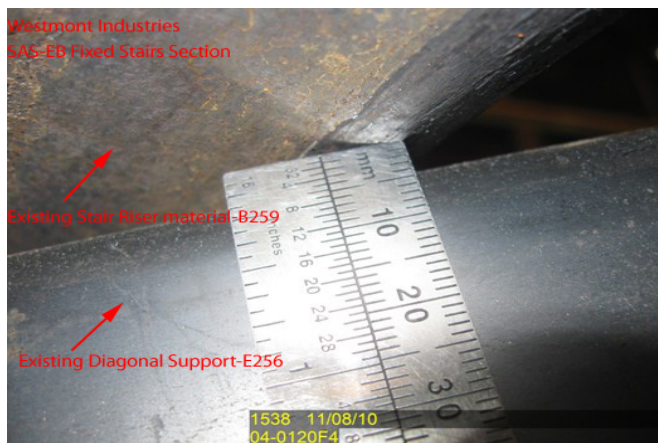
weld maps, for the purpose of identifying and tracking the in process and completed welds, for the project. The QA Inspector observed that Mr. Anaya appeared to be performing the above mentioned activities with the assistance of a WMI helper.

The QA Inspector observed that Smith-Emery QC Inspector Ruben Dominguez was present, during the above mentioned welding and tacking activities and QC Inspector Dominguez explained that approved Welding Procedure Specifications (WPS's) were being utilized. The QA Inspector randomly observed that the applicable WPS's and copies of the shop drawings, were located near each work station, where the above mentioned FCAW and fitting activities were being performed. The QA Inspector randomly verified that the consumable material, utilized during the welding was in compliance to the applicable WPS and that the above mentioned welders were currently qualified for the applicable process and position of welding. The QA Inspector randomly observed QC Inspector Dominguez verifying the in-process welding parameters, including voltage, amperage, pre-heat and travel speed and the parameters appeared to be in compliance to the applicable WPS.

Summary of Conversations:

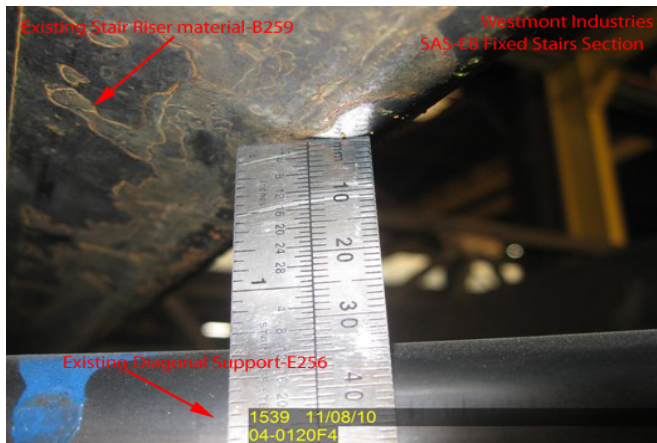
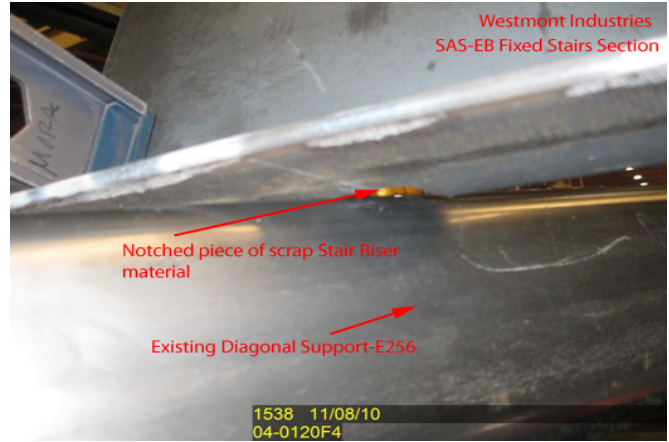
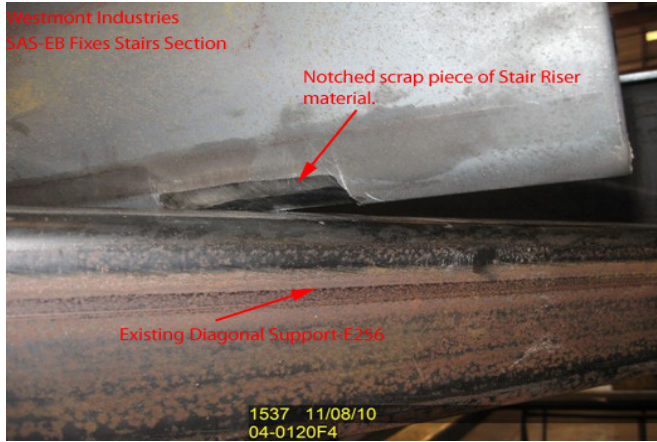
The QA Inspector spoke with Mr. Canales regarding this issue and Mr. Canales explained that future fitting of the additional Stair Riser material to Frame Assemblies will not be possible, due to a gradual incline of the Diagonal Supports. Mr. Canales further explained that WMI Shop Supervisor Mr. Juan Mora and engineering had been previously notified of this.

Later, the QA Inspector observed that Mr. Canales was in process of fitting what appeared to be a scrap piece of Stair Riser material to the Frame Assembly identified as 10-A237. The QA Inspector observed that the scrap piece of material, had been notched or cut out to accommodate the fit over the diagonal support. The QA Inspector then spoke with Shop Supervisor Juan Mora and Mr. Mora explained that this was a mock up, which is being fabricated to possibly resolve this issue with the current and future fit up of the Stair Riser material. Mr. Mora explained that once the mock up is complete, that an RFI will be submitted to Caltrans for review and potential approval of this design change. See attached pictures below.



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Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By: Vance,Sean

Quality Assurance Inspector

Reviewed By: Edmondson,Fred

QA Reviewer